



Illinois Department of Transportation

Memorandum

To: George F. Ryan, District 3 Attn.: Rick Powell
From: Ralph E. Anderson By: Todd Ahrens
Subject: BRIDGES AND STRUCTURES
Date: November 19, 2008

Todd Ahrens
(AVS)

FAP 326 (IL 47)
Section (107,108,108S)R-1
Kendall Count

P-93-013-07
SN: 047-0053

IL 47 over Blackberry Creek

The Bridge Condition Report submitted with your memorandum dated June 24, 2008, recommends the proposed scope of work as follows:

- Remove and replace the entire superstructure with a new widened deck supported on new PPC I beams.
- Widen the abutments and piers to accommodate new widened superstructure.
- Use of stage construction.

After reviewing the Bridge Condition Report and Proposed Bridge Drawing, we have following comments/recommendations:

1. We concur with the consultant's recommendation to remove and replace the entire superstructure on a widened substructure based on the following reasons/ factors collectively;
 - a) The deck needs to be widened with a flush median area and sidewalk/bike path on either side to match existing approach roadway.
 - b) It is difficult to remove the deck without damaging the existing beams or affecting the capacity of these beams.
 - c) The abutments and piers are in good condition.
 - d) The existing beam layout does not accommodate the proposed relocation of the centerline/crown of roadway.

This concurrence with superstructure replacement assumes the proposed profile grade will not require the existing beam seats to be lowered.

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2. The proposed rehabilitation also calls for widening of the slopewalls to accommodate the new widened substructure and superstructure width.
3. During the design of the widened portion of the substructure, necessary consideration shall be given to ensure integral behavior of the proposed rehabilitated abutments and constant stiffness of the piers and abutments in conjunction with existing and proposed piles across the whole width.
4. The physical condition of the existing abutment caps and pier caps and walls should be surveyed prior to the development of the TSL plans.
5. Please contact your District Geotechnical Engineer as boring data will be required at this structure. The Foundations and Geotechnical Unit can be contacted if assistance is needed regarding substructure exploration requirements or if any existing boring or foundation data is required.
6. Stage construction looks feasible.
7. The proposed bridge width is acceptable as long as it matches the proposed approach roadway template.

The BCR is hereby approved subject to these comments. Please note that a Type, Size, and Location (TSL) plan, structure report, final proposed cross section, proposed plan and profile, and structure geotechnical report will be required for this project. Appropriate steps to initiate the TSL plan preparation should be taken.

DPN/bam0470053-20081119

cc: George F. Ryan, District 3 / Attn.: T. McClearly